REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.112, and in light of the remarks which follow, are respectfully requested.

Allowed claim 16 has been rewritten in independent form as new claim 42. Claim 40 has been amended to depend upon claim 42. Claim 19 has been amended to be directly dependent upon claim 1. Claim 22 has been canceled since the feature therein is already present in claim 19. Method of use claims 37-39 have been revised to convert them to dependent article of manufacture claims. Claims 1-10, 12-15, 17-21 and 23-42 are now pending in this application.

The indication of allowable subject matter is acknowledged with appreciation. Claim 16 has been rewritten as claim 42. Accordingly, claims 10 and 40-42 are allowable. However, the Applicants disagree with the Examiner's interpretation of the scope of claim 10 as discussed on page 8 of the Office Action. The instant specification clearly discloses that the synthetic fibers may be thermally shrunken after formation of the non-woven layer (page 13, lines 5-10) as well as before formation of the non-woven layer (page 14, lines 12-14).

Claims 1, 3-9, 14, 15, 17 and 18 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,616,395 to Baravian et al. in view of U.S. Reissue Patent No. 33,023 to Hiers for the reasons presented in paragraph (3) of the Office Action. Reconsideration and withdrawal of this rejection are respectfully requested for at least the following reasons.

There are several important distinctions between the presently claimed laminates and the laminates described in Baravian et al. '395:

(1) the laminates of the reference consist of two layers, a glass fiber-containing layer and a synthetic fiber non-woven layer, as opposed to the laminates of claims 3, 7 and 8;

(2) the glass fiber layer in the reference is not consolidated (column 6, lines 46-47);

(3) while needling is mentioned in the reference as a possible means to bind the layers together, there is no disclosure or suggestion in Baravian et al. '395 to needle the layers together such that a portion of the synthetic fibers passes entirely through the glass fiber layer and penetrates the surface thereof. These differences are significant and contribute to the strength, dimensional stability and other improved properties of the laminates of the invention.

Hiers '023 is relied upon to provide the aforementioned distinctions between the claimed laminates and those of Baravian et al. '395. The composite textile of Hiers '023 is composed of a glass fiber layer and an organic fiber layer prepared by needling such that the organic fibers are "disposed substantially through the glass fiber layer" (Abstract). Hiers '023 does not disclose that a portion of the organic fibers passes through the glass fiber layer and penetrates the surface of the glass fiber layer. This is an important feature of the invention since the protruding fibers serve to "inter-lock" the layers together and improve bonding when subsequently impregnated with bitumen. This technique provides excellent mechanical and fire-retardant properties without the necessity of employing binders for a final consolidation.

With respect to claims 3, 7 and 8, the Examiner contends that it would have been obvious to modify the laminate of Baravian et al. '395 to include an additional

layer in view of the disclosure of Hiers '023. Applicants respectfully disagree and point out that Baravian et al. '395 expressly teaches away from sandwiching the glass fiber layer between organic fiber layers; note column 2, lines 9-15 ("which arrangement is exactly to be avoided"). If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no motivation to make the proposed modification (M.P.E.P. §2143.01, pg. 2100-126, Feb. 2003). Quite clearly, adding an additional synthetic fiber layer to the laminate of Baravian et al. '395 would isolate the glass fiber fire-retardant layer. This is exactly the arrangement which the reference states is to be avoided.

For at least the above reasons, the §103(a) rejection based on Baravian et al. '395 in view of Hiers '023 should be withdrawn. Such action is therefore earnestly requested.

Claims 2, 12 and 13 were rejected under 35 U.S.C. §103(a) as unpatentable over Baravian et al. '395 in view of Hiers '023 and further in view of U.S. Patent No. 5,171,629 to Heidel et al. The Examiner's rationale is set forth in paragraph (4) of the Office Action. Reconsideration of this rejection is requested for at least the following reasons.

Heidel et al. '629 has been cited for its disclosure of pre-consolidating glass fiber mats with melamine resins or polymer binders. This reference fails to supply the deficiencies in the basis combination of Baravian et al. '395 and Hiers '023 as previously discussed. Even if those of ordinary skill in the art were motivated to modify the textile laminates of Baravian et al. '395 in accordance with the disclosures of Hiers '023 and Heidel et al. '629, the resultant products would not have the layers bound by needling such that a portion of the synthetic fibers passes through the

glass fiber and penetrates the surface thereof. Such an arrangement provides a laminate which resists delamination and has excellent tensile strength without the application of end binders

A surprising and important advantage of the present invention is the fact that the use of resinous binders for final consolidation can be eliminated without adversely affecting the properties of the laminates. The elimination of final consolidation binders provides economic advantages (the cost of binders), environmental advantages (avoid using organic solvents with binders), and surprisingly, yields products of improved strengths. In this connection, attention is directed to the data on page 20 of the specification. A laminate prepared according to the invention without using a binder for final consolidation was bituminized and compared to a similar bituminized laminate manufactured with end consolidation using a binder. The comparative data shows that the laminates prepared in accordance with the invention unexpectedly provided bituminized products having significantly higher tensile strength. Those results could not have been predicted from the teachings of the cited references.

For at least these reasons, the §103(a) rejection based on Baravian et al. '395 in view of Hiers '023 and Heidel et al. '629 should be reconsidered and withdrawn. Such action is earnestly solicited.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at her earliest convenience.

Respectfully submitted,

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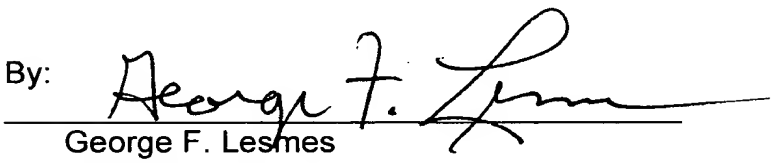
By: 

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